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Title: COVID-19 and Machine Learning: Preliminary Exploration

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COVID-19 and Machine Learning: Preliminary Exploration

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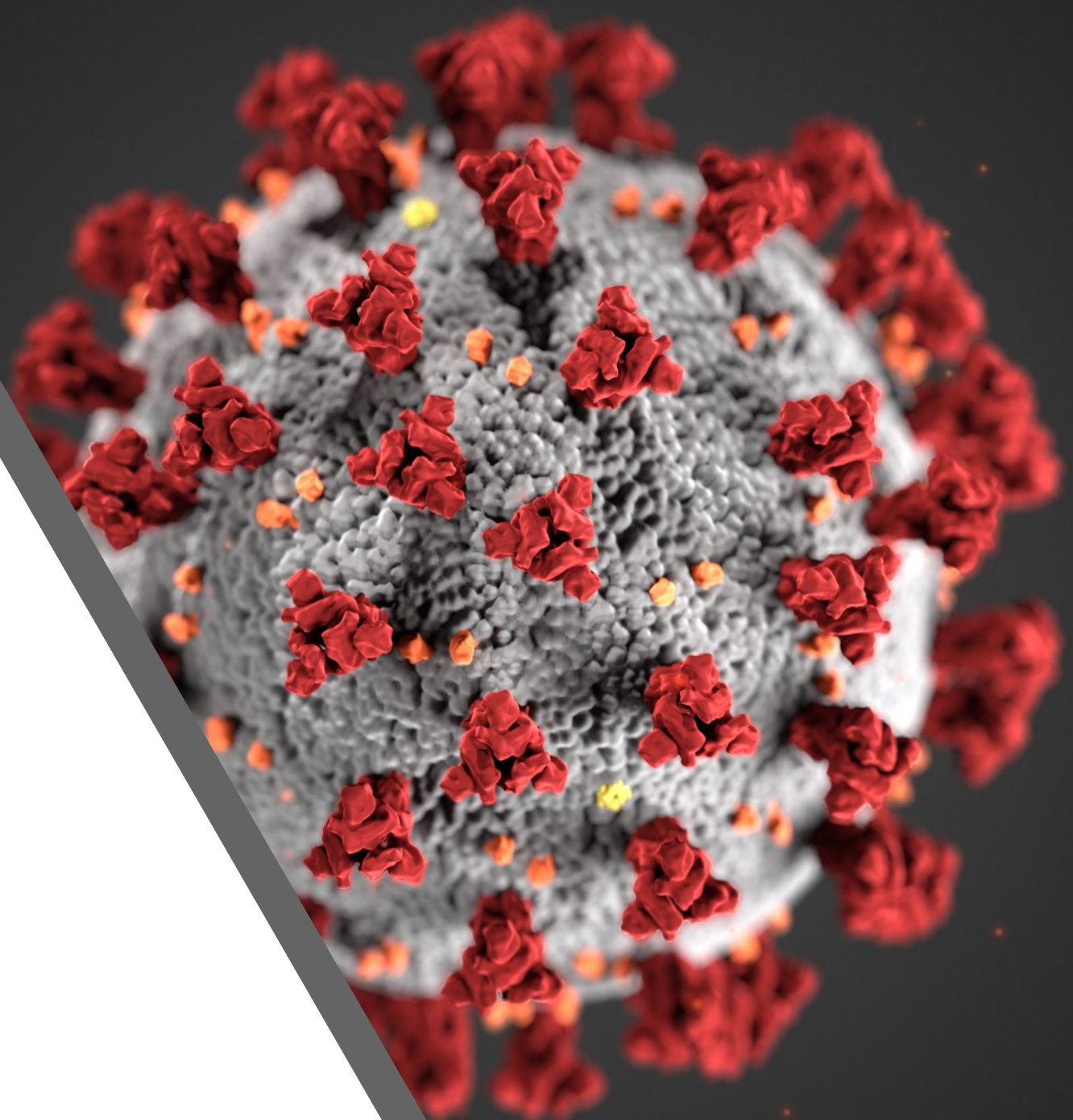
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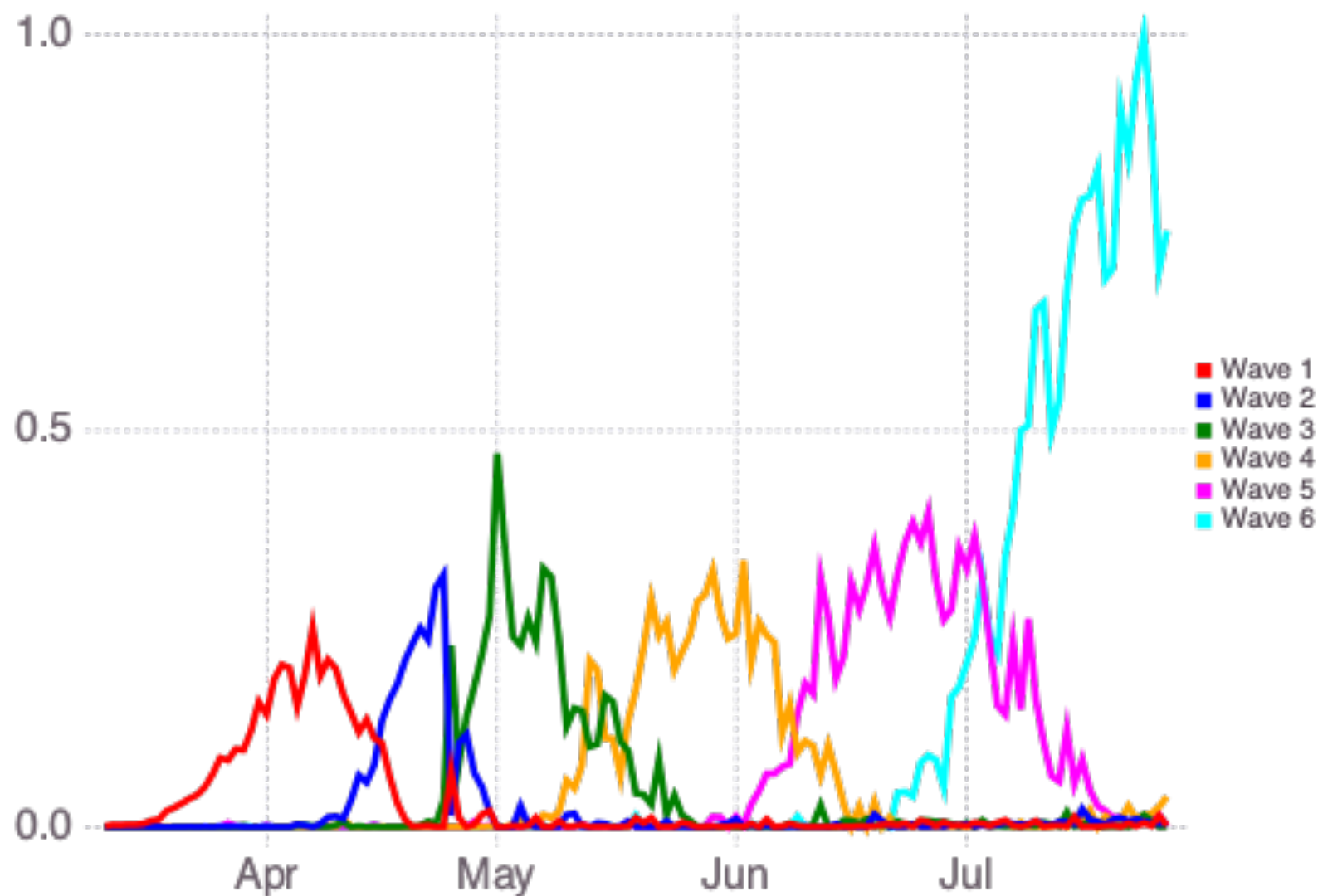
Earth and Environmental Sciences
Los Alamos National Laboratory

May 31st, 2020



Preliminary Results (July 27, 2020): Cases

- 6 “Cases” Waves

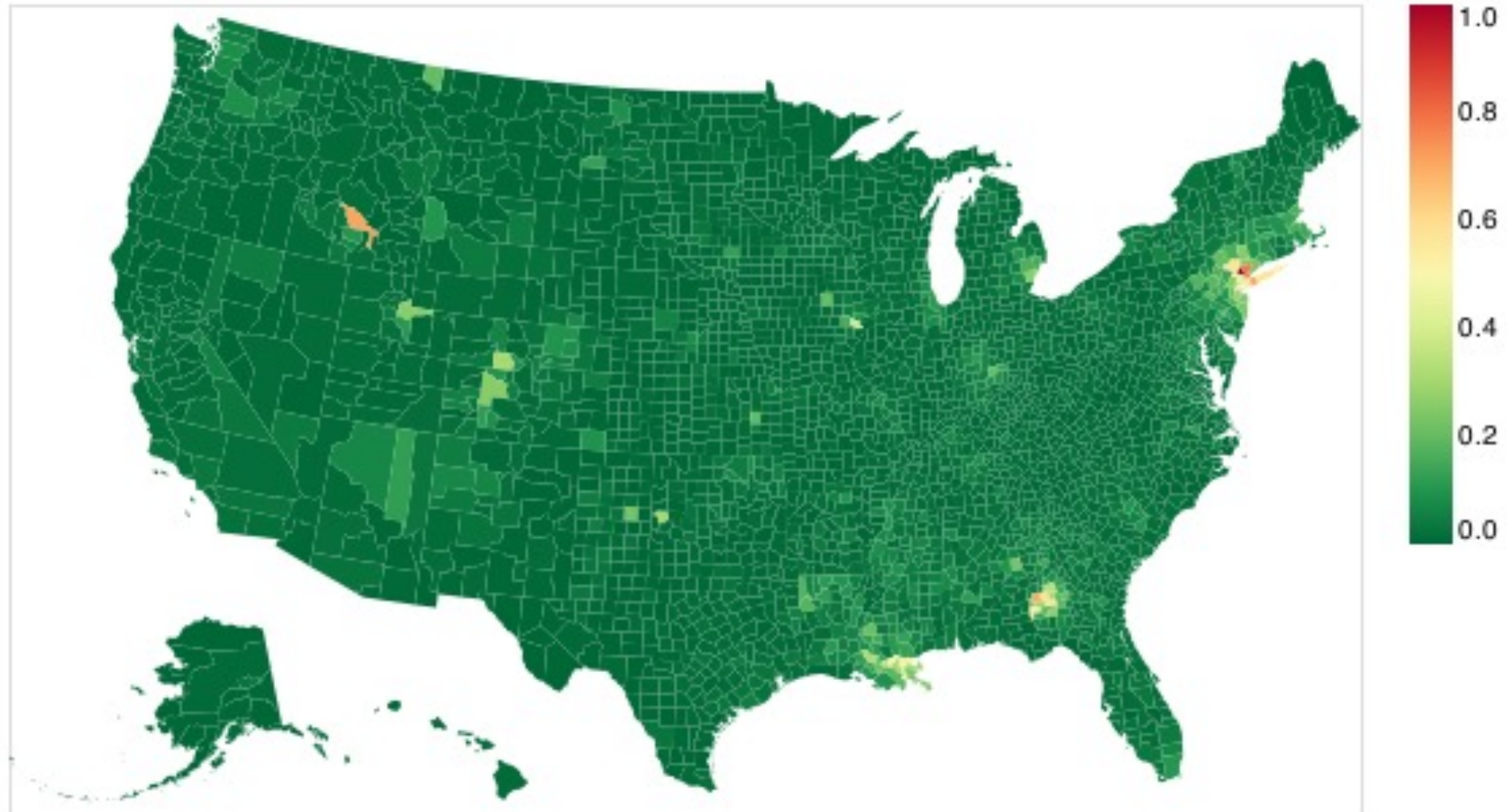
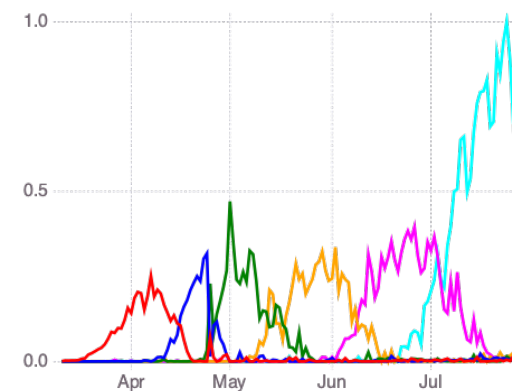


ML & COVID-19: Transient analyses

Preliminary Results (July 27, 2020): Cases

- 6 “Cases” Waves

Wave 01: Cases Peak Date: 2020-04-07

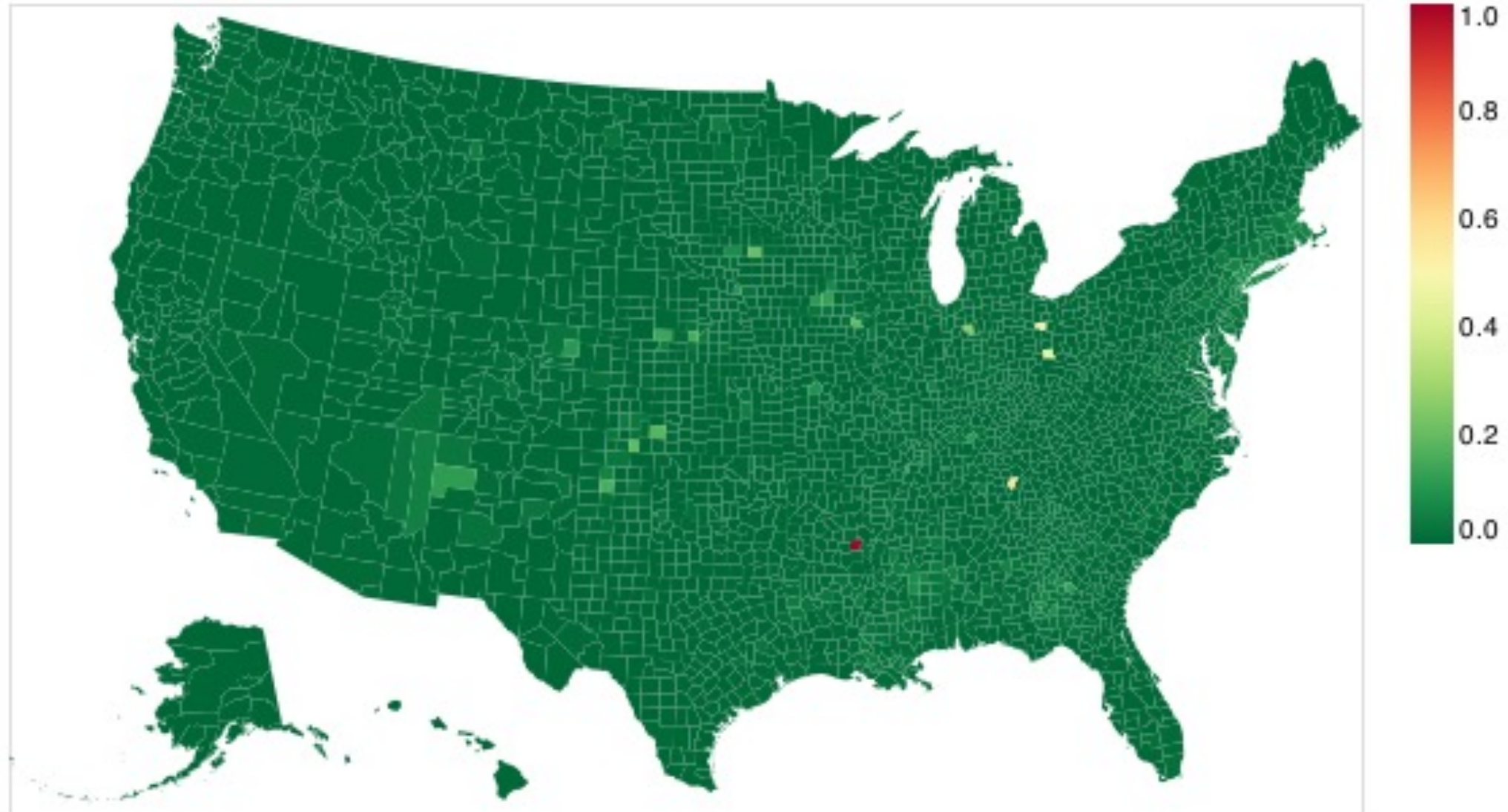
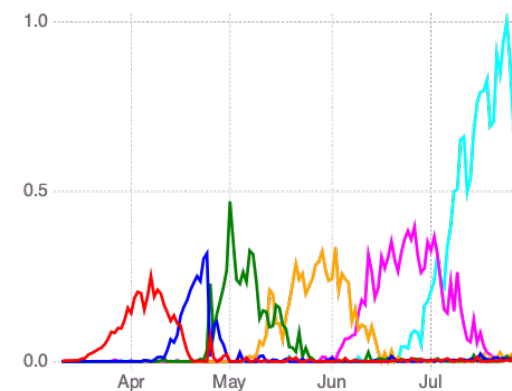


ML & COVID-19: Transient analyses

Preliminary Results (July 27, 2020): Cases

- 6 “Cases” Waves

Wave 02: Cases Peak Date: 2020-04-24

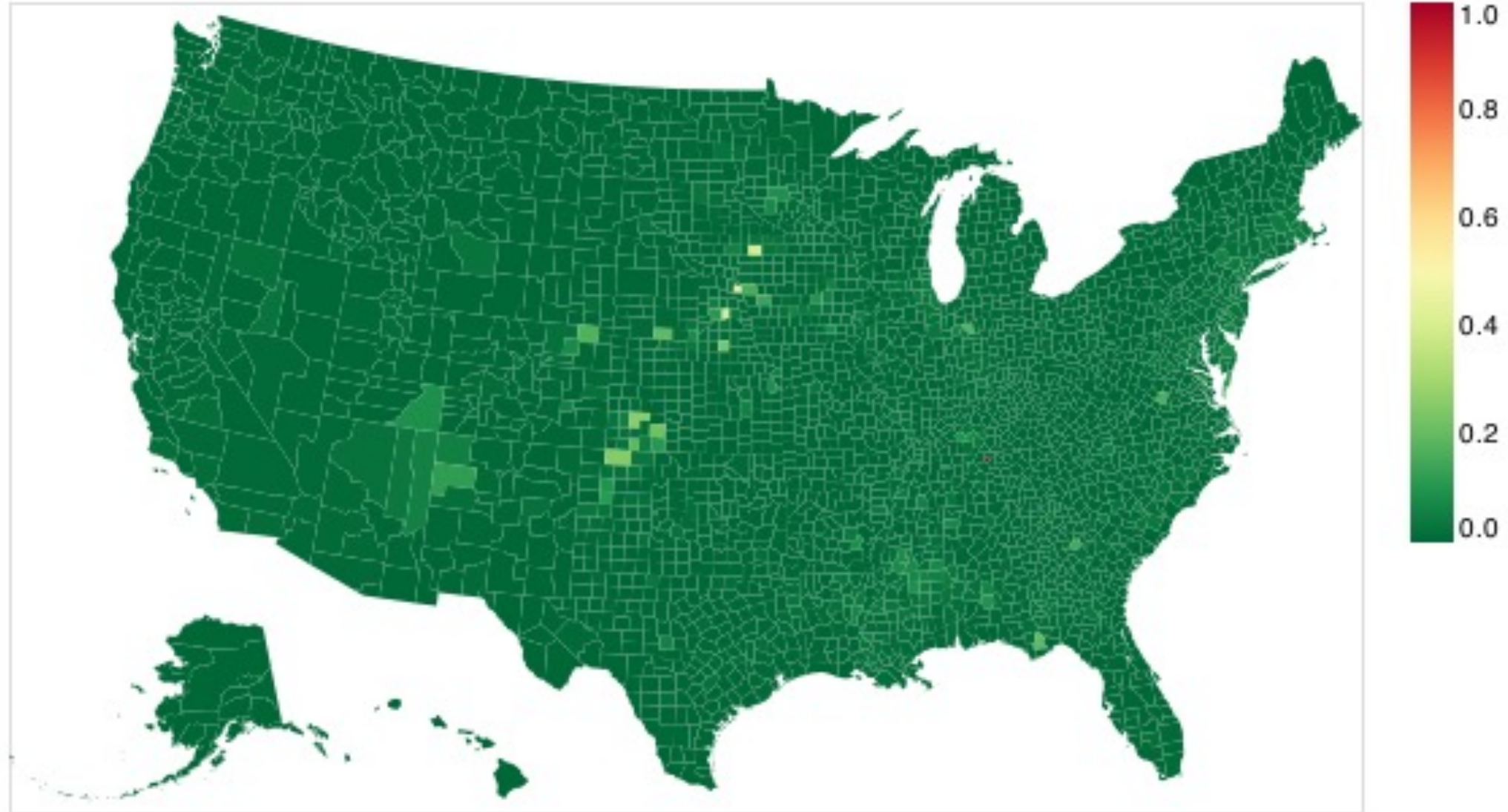
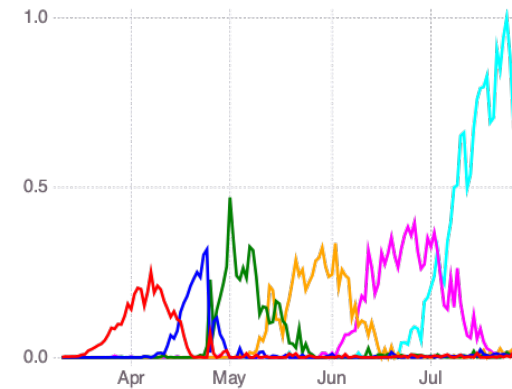


ML & COVID-19: Transient analyses

Preliminary Results (July 27, 2020): Cases

- 6 “Cases” Waves

Wave 03: Cases Peak Date: 2020-05-01

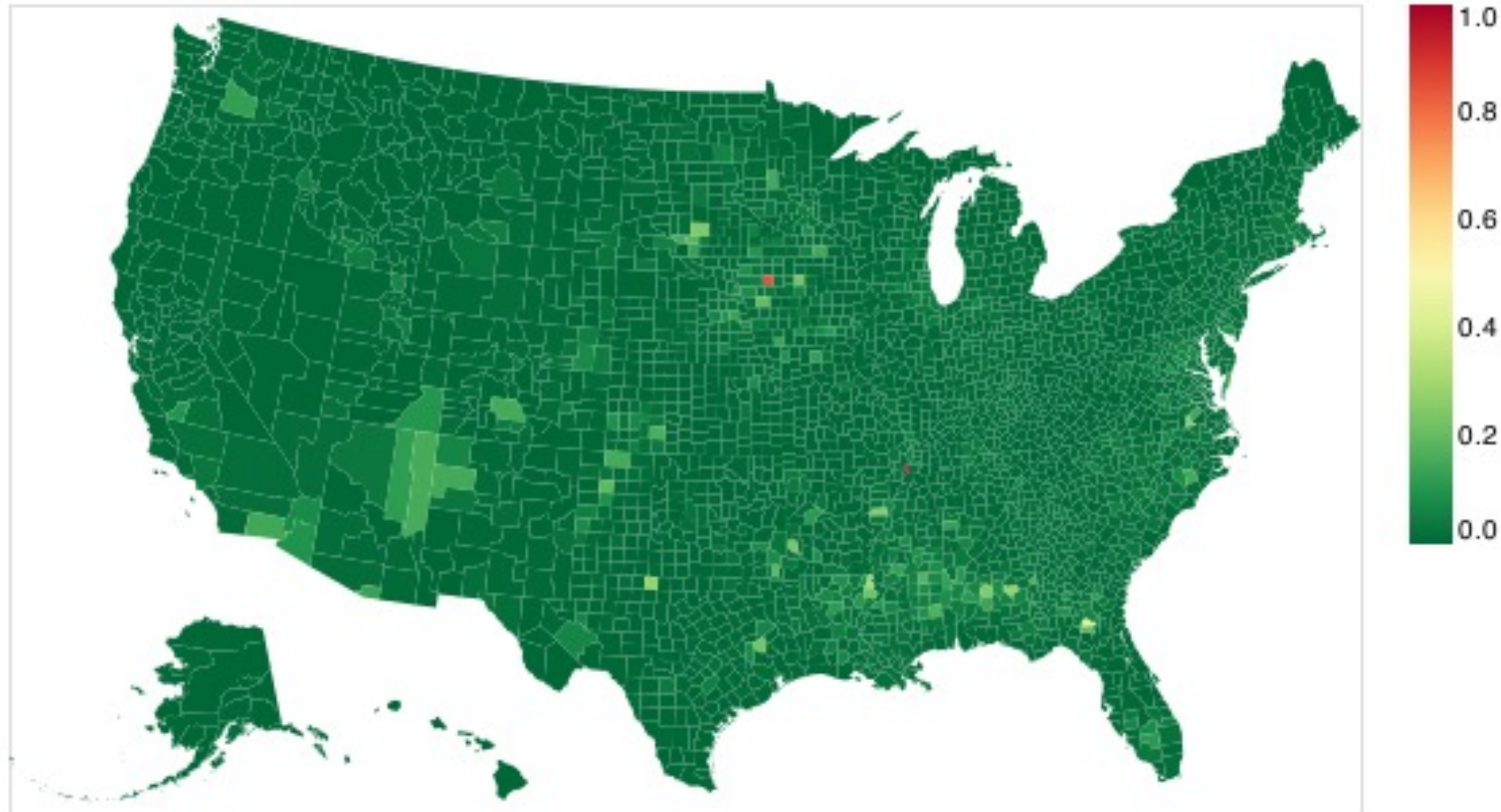
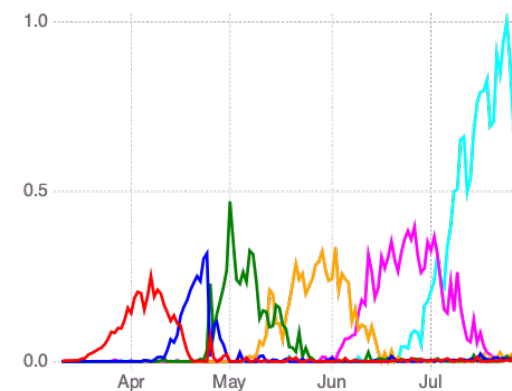


ML & COVID-19: Transient analyses

Preliminary Results (July 27, 2020): Cases

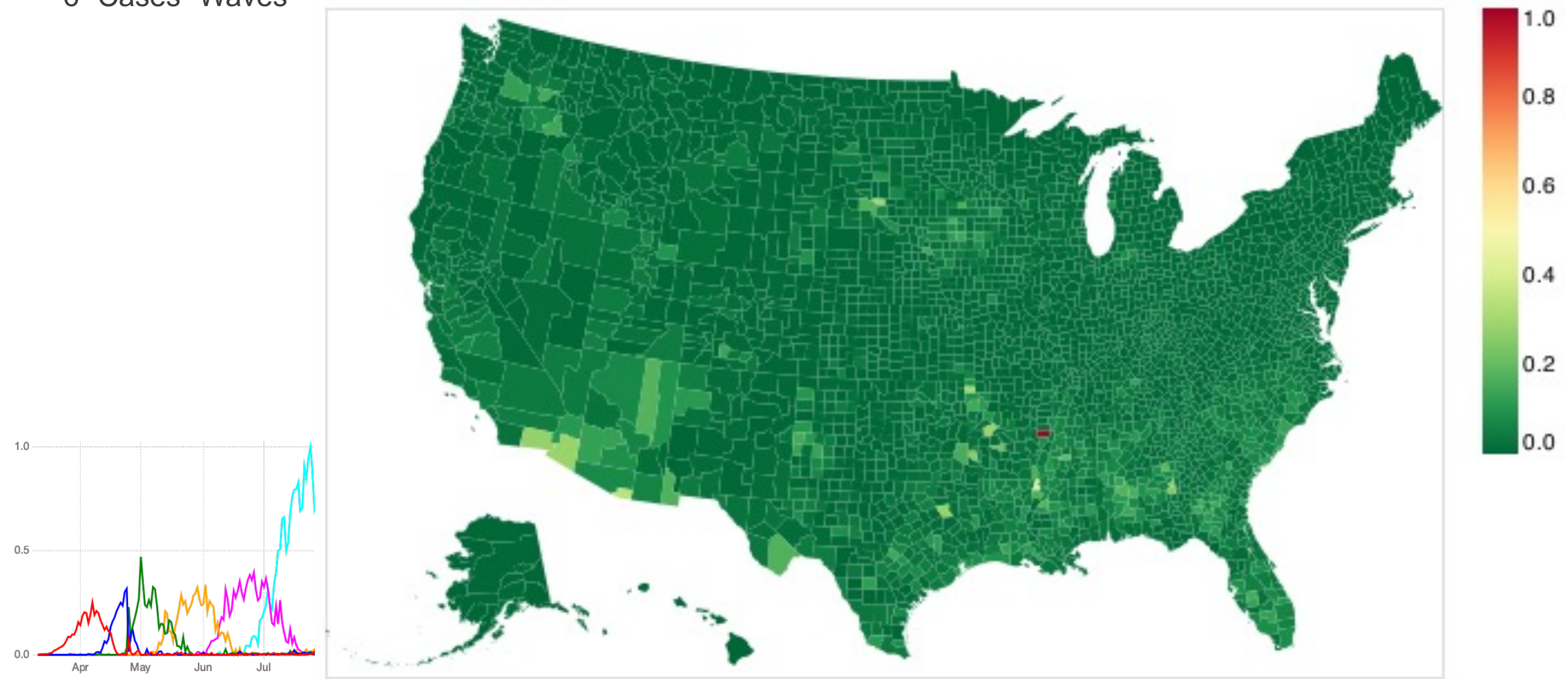
- 6 “Cases” Waves

Wave 04: Cases Peak Date: 2020-06-02



- 6 “Cases” Waves

Wave 05: Cases Peak Date: 2020-06-26

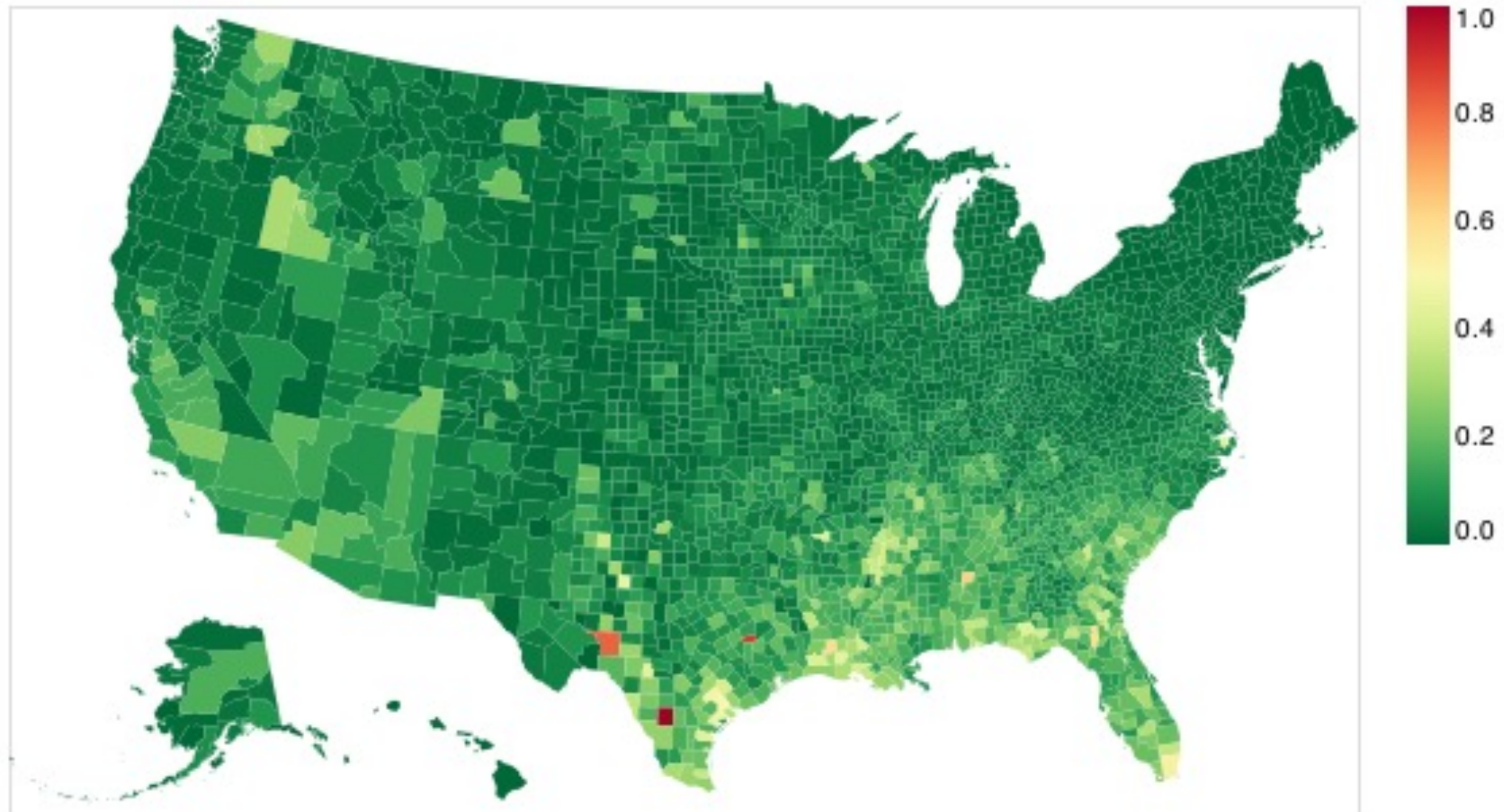
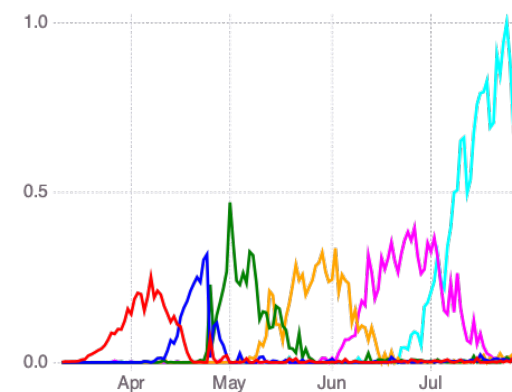


ML & COVID-19: Transient analyses

Preliminary Results (July 27, 2020): Cases

- 6 “Cases” Waves

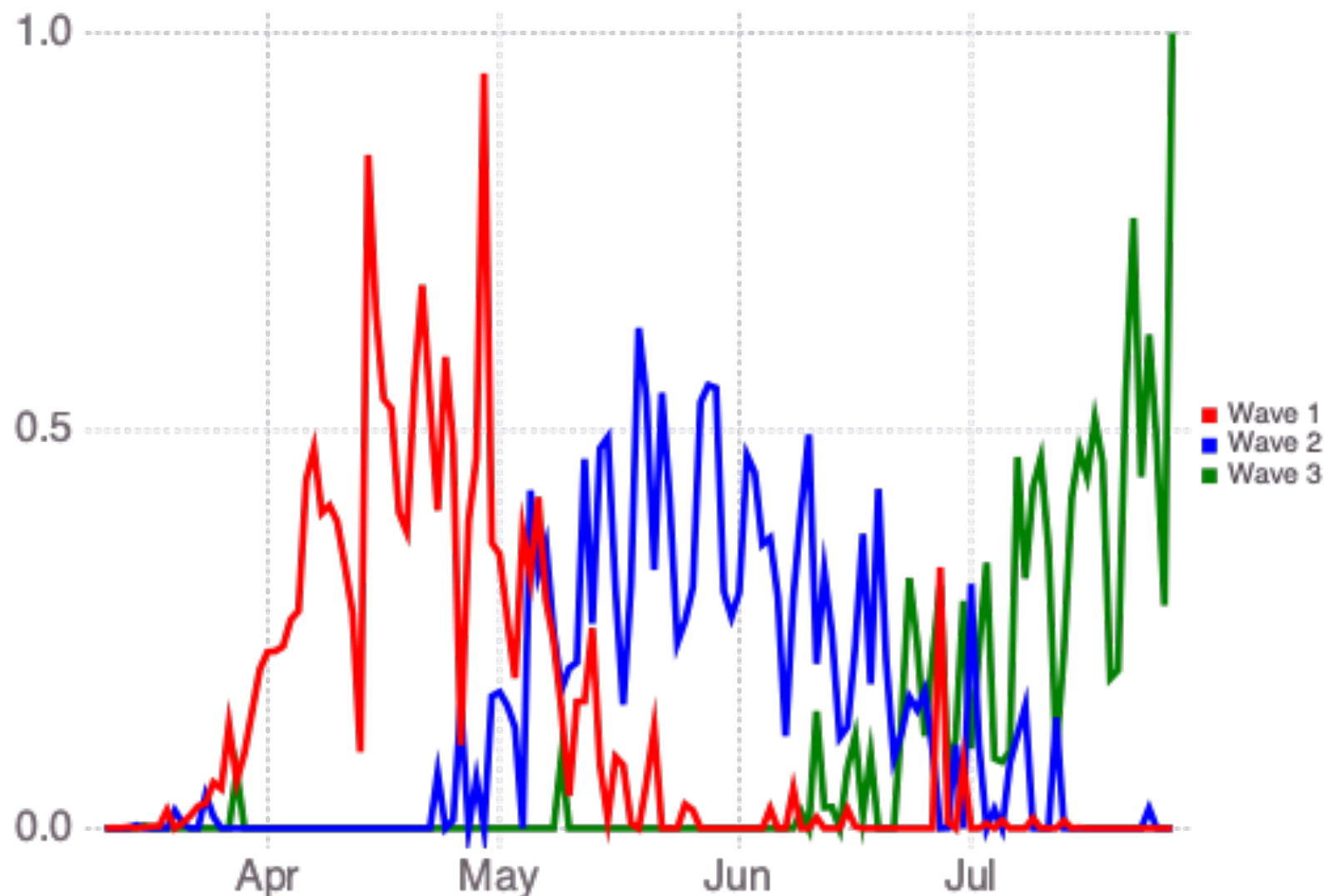
Wave 06: Cases Peak Date: 2020-07-24



ML & COVID-19: Transient analyses

Preliminary Results (July 27, 2020): Deaths

- 3 “Deaths” Waves

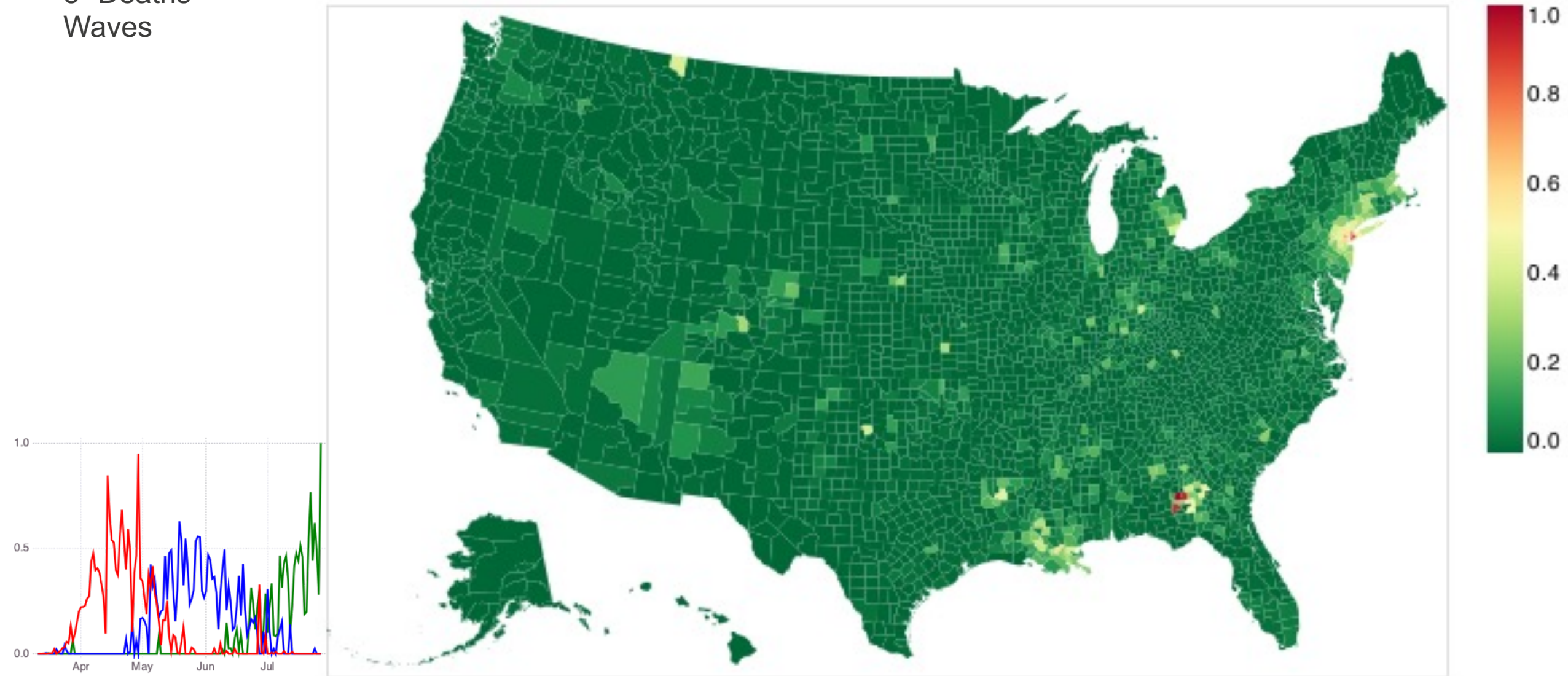


ML & COVID-19: Transient analyses

Preliminary Results (July 27, 2020): Deaths

- 3 “Deaths” Waves

Wave 01: Deaths Peak Date: 2020-04-29

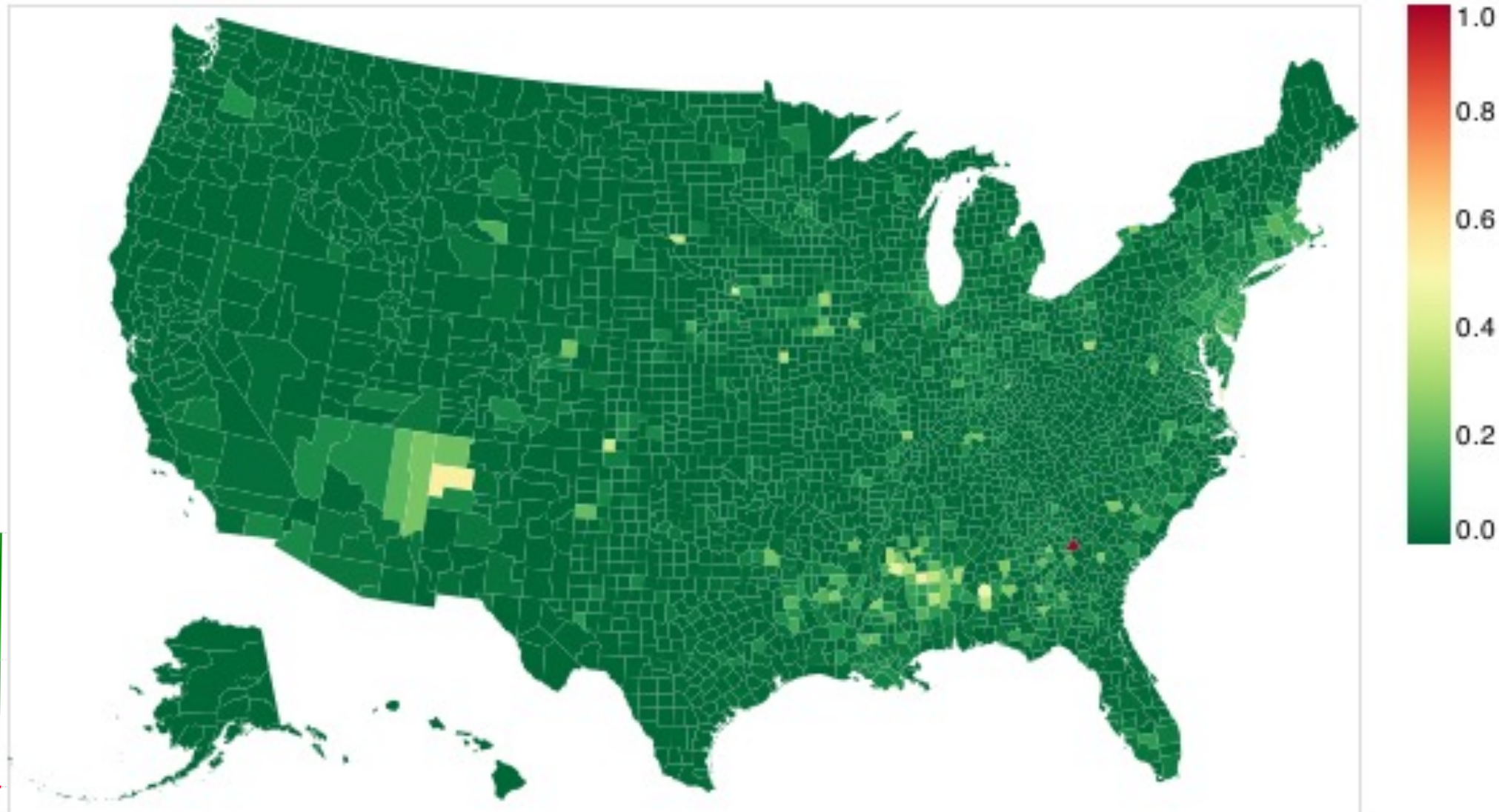
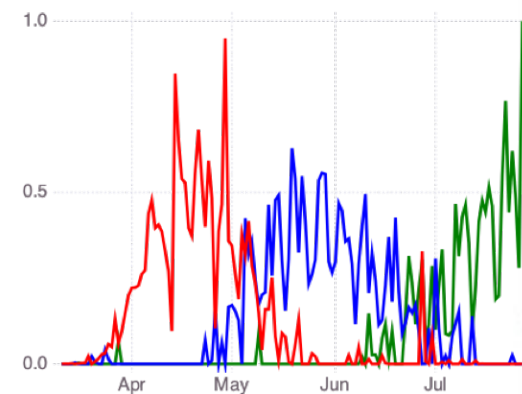


ML & COVID-19: Transient analyses

Preliminary Results (July 27, 2020): Deaths

- 3 “Deaths” Waves

Wave 02: Deaths Peak Date: 2020-05-19

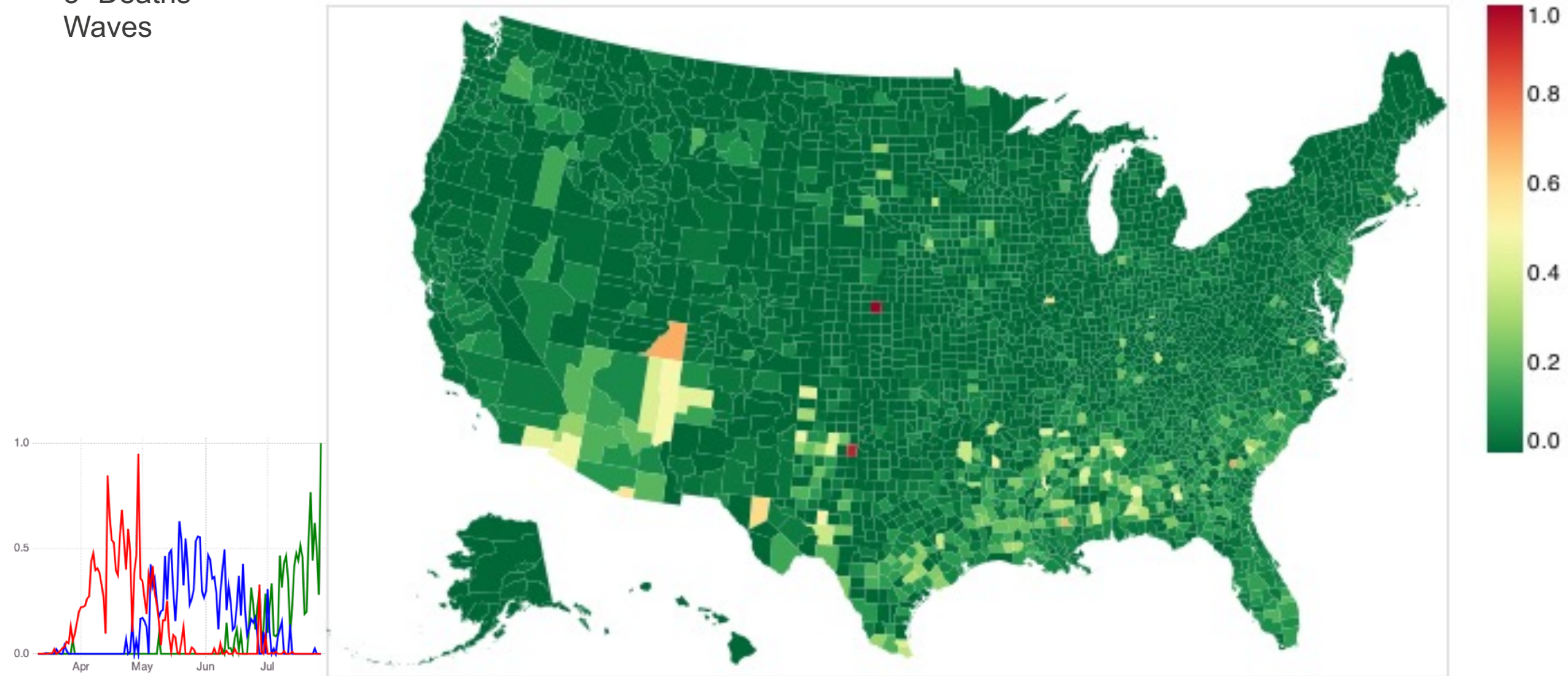


ML & COVID-19: Transient analyses

Preliminary Results (July 27, 2020): Deaths

- 3 “Deaths” Waves

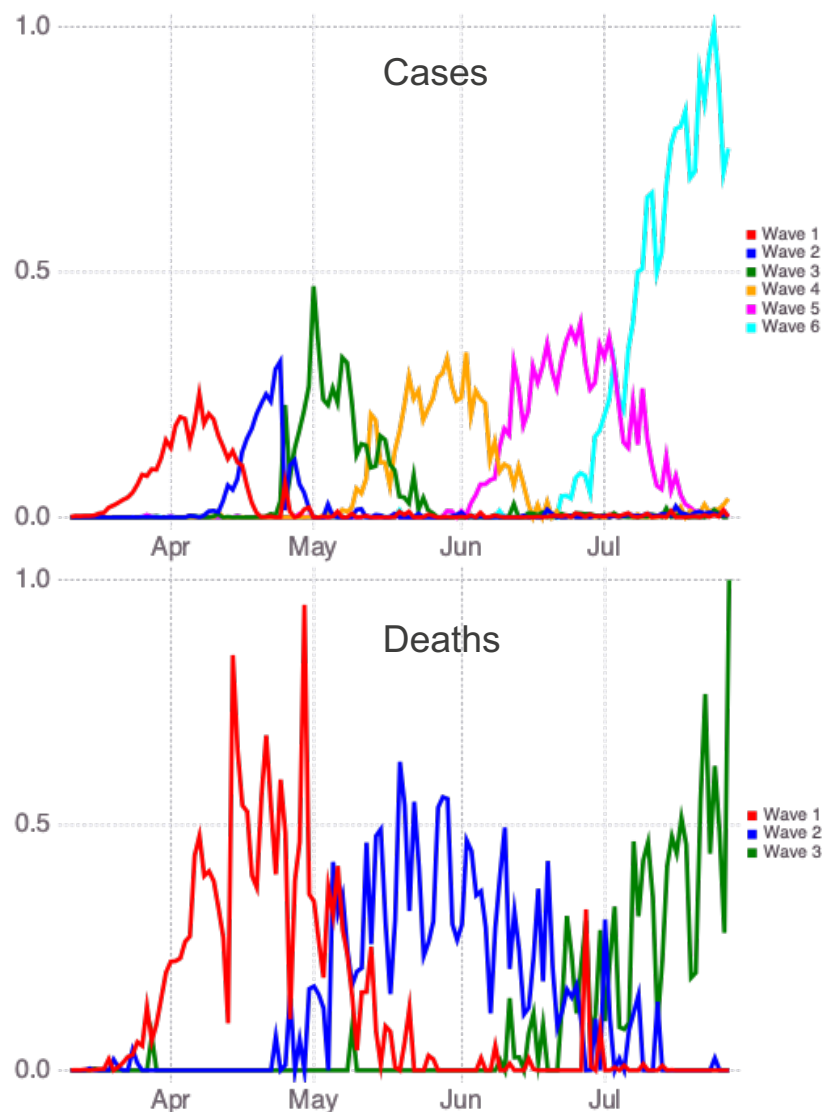
Wave 03: Deaths Peak Date: 2020-07-27



ML & COVID-19: Transient analyses

Preliminary Results (July 27, 2020)

- 6 “Cases” Waves
- 3 “Deaths” Waves



ML & COVID-19: Further analyses

Future work

➤ Categorize counties based on:

- Static data
- Cases transients
- Deaths transients

➤ Develop predictive ML model

➤ Train and verify the ML model based on categorized counties

